WHAT IS CLAIMED IS:

1. A cathode ray tube comprising:

a panel, a phosphor screen being arranged on an inner surface of the panel;

a funnel having a deflection yoke on an outer periphery thereof, including:

a body connected to the panel; and

a cone connected to the body; and

a neck, connected to the cone of the funnel, having an electron gun disposed therein,

wherein the cone has a deflection power reducing shape which is formed to have a range of length 0.25× L from an end of the cone at the neck where L is an entire length of the cone measured along an axis of symmetry of the cathode ray tube.

2. The cathode ray tube as recited in claim 1, wherein the deflection power reducing shape is formed in such a manner that the outline of the cone has a shape of an arc on the range of the length 0.25× L from the end of the cone at the neck as viewed in a cross section perpendicular to the axis of symmetry and satisfies the following conditions:

$$|Cz| < 4.5 \text{ mm}$$

$$25 \text{ mm} < r1 < 50\text{mm}.$$

where Cz is a coordinate of a center for the arc in the axis of symmetry direction from the end of the cone at the neck; and

r1 is a radius of curvature of the arc.

3. The cathode ray tube as recited in claim 1, wherein the deflection power reducing shape is formed in such a manner that the outline of the cone has a curvature on the range of the length 0.25× L from the end of the cone at the neck along the entire length as viewed in a cross section perpendicular to the axis of symmetry and satisfies the following condition:

$$0.26 < R < 0.43$$

where R is an average variation of height measured from the axis of symmetry to the each point of the curvature.